

Claims

- [c1] 1. A temperature regulating system for a vehicle, said temperature regulating system comprising:
an hydraulic arrangement (6) configured to provide components intended for rotation located in a gearbox (5) of a vehicle and in at least one axle of the vehicle with hydraulic oil from the same container (7).
- [c2] 2. The temperature regulating system as recited in claim 1, further comprising:
at least one space for housing at least one of the components being adapted for a dry sump.
- [c3] 3. The temperature regulating system as recited in claim 2, wherein the hydraulic arrangement (6) further comprises means for spraying the hydraulic oil over the components and means for removing the oil from the space.
- [c4] 4. The temperature regulating system as recited in claim 3, wherein the oil removal means is adapted to remove the oil continuously from the space during operation of the vehicle so that substantially no amount of oil is left present in an inactive state in the space.

- [c5] 5. The temperature regulating system as recited in claim 1, wherein the hydraulic arrangement (6) further comprises a first pump (8) for pumping oil from the container (7) to the gearbox (5) and to the vehicle axle.
- [c6] 6. The temperature regulating system as recited in claim 1, wherein the hydraulic arrangement (6) further comprises at least two second pumps (17, 18, 20) including one (20) configured for suction of oil from the gearbox (5) and another (17, 18) for suction of oil from the vehicle axle.
- [c7] 7. The temperature regulating system as recited in claim 5, wherein each second pump (17, 18, 20) has a pump capacity of at least the same as the first pump (8) for supplying oil connected to the gearbox and to the axle.
- [c8] 8. The temperature regulating system as recited in claim 1, wherein the container (7) is located apart from the space in which the rotating components forming part of the axle are arranged.
- [c9] 9. The temperature regulating system as recited in claim 1, wherein the container (7) is located apart from the space in which the rotating components forming part of the gearbox (5) are arranged.

[c10] 10. The temperature regulating system as recited in claim 1, wherein the components intended for rotation located in the axles of the vehicle comprise on the one hand disks in a wet brake (35, 36) and on the other hand gear wheels in a gear (14, 15).

[c11] 11. The temperature regulating system as recited in claim 1, further comprising:
an arrangement (22) for regulating the temperature of the oil in the hydraulic arrangement (6) via a heat exchanger unit (21).

[c12] 12. The temperature regulating system as recited in claim 11, wherein the temperature regulating arrangement (22) is further adapted to cool the engine (4) of the vehicle.

[c13] 13. The temperature regulating system as recited in claim 11, further comprising:
a sensor (28) for sensing the temperature of the oil and a control unit (29) connected to the sensor; and
the temperature regulating arrangement being further adapted to cool or heat the oil depending sensed oil temperature.

[c14] 14. The temperature regulating system as recited in claim 12, further comprising:

a sensor (31) connected to the control unit (29) for sensing the temperature of the coolant of the engine.

[c15] 15. A vehicle with a temperature regulating system comprising:

a transport machine; and

an hydraulic arrangement (6) configured to provide components intended for rotation located in a gearbox (5) of the transport machine and in at least one axle of the transport machine with hydraulic oil from the same container (7).

[c16] 16. A vehicle with a temperature regulating system comprising:

a construction machine; and

an hydraulic arrangement (6) configured to provide components intended for rotation located in a gearbox (5) of the construction machine and in at least one axle of the construction machine with hydraulic oil from the same container (7).